

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (currently amended) An information recording and reproduction processing apparatus that executes data recording and reproduction processing, comprising:

storing means for data recording;

a recording control process execution unit that generates reproduction management information including at least data recording end position information and executes data recording control for the storing means; and

a reproduction control process execution unit that executes reproduction control processing for data, which is read out from the storing means, on the basis of the reproduction management information, ~~characterized in that~~

~~the recording control process execution unit has a constitution for, in the case of data recording processing, being operable to generating reproduction synchronization management information indicating that recording processing for data is in progress, to associating the reproduction synchronization management information with the reproduction management information, and executing processing for to recording the generated reproduction synchronization management information in a directory that is automatically erased at the time of system startup or at the time of system shutdown, and~~

~~the reproduction control process execution unit is constituted being operable to, in the case of data reproduction processing, extract reproduction management information corresponding to reproduction data, execute to retrieval processing for reproduction synchronization management information based upon the extracted reproduction management information, to judge whether data is being recorded on the~~

basis of the presence or absence of the retrieved reproduction synchronization management information, and to execute data reproduction control according to a result of the judgment.

2. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

the recording control process execution unit is ~~constituted~~operable to ~~execute processing for storing~~the reproduction synchronization management information in a volatile memory.

3. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

the recording control process execution unit is ~~constituted~~operable to ~~execute processing for setting~~ a reproduction synchronization management information name, ~~which is set in the reproduction synchronization management information,~~ as a file name that can be identified uniquely from ~~the~~a reproduction management information name, and

the reproduction control process execution unit is ~~constituted~~operable to specify ~~a~~the reproduction synchronization management information name on the basis of the reproduction management information name and ~~execute to retrieve~~to ~~processing for~~ reproduction synchronization management information on the basis of the reproduction synchronization management information name.

4. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

the information recording and reproduction processing apparatus has an upper layer process execution unit that executes setting processing for the recording control process, the recording control process execution unit is constituted operable to generate an identifier (ID) with which the reproduction management information can be identified uniquely and to output the generated identifier to an upper process execution unit,

the upper layer process execution unit is constituted operable to execute processing for storing the identifier (ID) in a storage unit and to manage the identifier, and

the reproduction control process execution unit is constituted operable to execute processing for inputting the identifier (ID) from the upper process execution unit and to acquire the reproduction management information on the basis of the identifier (ID).

5. (currently amended) An information recording and reproduction processing apparatus according to claim 1, characterized in that wherein

the storing means includes a nonvolatile memory, and
the recording control process execution unit is constituted operable to execute recording of data to be an object of reproduction processing with respect to the storing means constituted by a nonvolatile memory and execute processing for to storing the reproduction synchronization management information in a volatile memory different from the storing means.

6. (currently amended) An information recording and reproduction processing apparatus according to claim 1, characterized in that wherein

~~the reproduction control processing execution unit is constituted to, in the case in which when reproduction synchronization management information is detected, the reproduction control processing execution unit is operable to judge that data recording processing is in progress, and to execute control for reproduction processing while confirming an update state of a recording end point position in the reproduction management information, and, in the case in which~~

~~when a reproduction position reaches the recording end point position in the reproduction management information, the reproduction control process execution unit is operable to perform a reproduction suspension processing.~~

7. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

~~the reproduction control process execution unit is constituted to, in the case in which when reproduction synchronization management information is not detected, the reproduction control process execution unit is operable to judge that data recording processing is not in progress, and to execute reproduction control for data as recorded data, and, in the case in which~~

~~when a reproduction position reaches a recording end point position in the reproduction management information, the reproduction control process execution unit is operable execute control for~~to shifting to a reproduction ending processing.

8. (currently amended) An information recording and reproduction processing apparatus according to claim 1, ~~characterized in that~~wherein

~~the reproduction control process execution unit is constituted to, in the case in which when reproduction~~

synchronization management information is detected, the reproduction control process execution unit is operable to periodically verify the presence or absence of the reproduction synchronization management information, in the case in which
when the reproduction synchronization management information is erased, the reproduction control process execution unit is operable to execute reproduction control for data as recorded data, and, in the case in which
when a reproduction position reaches a recording end position in the reproduction management information, the reproduction control process execution unit is operable to execute control for shifting to a reproduction ending processing.

9. (currently amended) An information recording and reproduction processing apparatus that executes data recording and reproduction processing, comprising:

storing means for data recording;

a recording control process execution unit that generates reproduction management information including at least data recording end position information and executes data recording control for the storing means; and

a reproduction control process execution unit that executes reproduction control processing for data, which is read out from the storing means, on the basis of the reproduction management information, ~~characterized in that~~

the recording control process execution unit being operable to has a constitution for, in the case of data recording processing, executing processing for generating reproduction synchronization management information indicating that recording processing for data is in progress and recording management information having link information for the reproduction synchronization management information, and to

~~storing~~ the generated reproduction synchronization management information and the recording management information in storing means, ~~and~~

~~—executing to retrieve~~ processing for recording management information including link information ~~at the time of system startup,~~ to extracting and ~~erasing~~ reproduction synchronization management information on the basis of the retrieved link information ~~of extracted recording management information,~~ and to executing ~~erasing~~ processing for the ~~extracted~~ retrieved recording management information, and

the reproduction control process execution unit being operable ~~to~~ is constituted to, in the case of data reproduction ~~processing,~~ extract reproduction management information corresponding to reproduction data, ~~execute to retrieve~~ processing ~~for~~ reproduction synchronization management information based upon the extracted reproduction management information, to judge whether data is being recorded on the basis of the presence or absence of the retrieved reproduction synchronization management information, and to execute data reproduction control according to a result of the judgment.

10. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~ wherein

the storing means includes a nonvolatile memory, and

the recording control process execution unit is constituted operable ~~to execute recording of data to be an object of reproduction and to recording of the reproduction synchronization management information and the recording management information with respect to the storing means~~ constituted by a nonvolatile memory.

11. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

the recording control process execution unit is ~~constituted~~operable to ~~execute processing for setting a reproduction synchronization management information name, which is set in the reproduction synchronization management information,~~ as a file name that can be identified uniquely from ~~the~~a reproduction management information name, and

the reproduction control process execution unit is ~~constituted~~operable to specify ~~a~~the reproduction synchronization management information name on the basis of the reproduction management information name and ~~execute to retrieve processing for reproduction synchronization management information on the basis of the reproduction synchronization management information name.~~

12. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

the information recording and reproduction processing apparatus has an upper layer process execution unit that executes setting processing for the recording control process,

the recording control process execution unit is ~~constituted~~operable to generate an identifier (ID) with which the reproduction management information can be identified uniquely and to output the ~~generated~~ identifier to an upper process execution unit,

the upper layer process execution unit is ~~constituted~~operable to ~~execute processing for storing~~the identifier (ID) in a storage unit and to manage the identifier, and

the reproduction control process execution unit is ~~constituted operable to execute processing for inputting~~ the identifier (ID) from the upper process execution unit and to acquire the reproduction management information on the basis of the identifier (ID).

13. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

~~the reproduction control processing execution unit is constituted to, in the case in which~~ when reproduction synchronization management information is detected, the reproduction control process execution unit is operable to judge that data recording processing is in progress, and to execute control for reproduction processing while confirming an update state of a recording end point position in the reproduction management information, and, ~~in the case in which~~

when a reproduction position reaches the recording end point position in the reproduction management information, the reproduction control process execution unit is operable to perform a reproduction suspension processing.

14. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

~~the reproduction control process execution unit is constituted to, in the case in which~~ when reproduction synchronization management information is not detected, the reproduction control process execution unit is operable to judge that data recording processing is not in progress, and to execute reproduction control for data as recorded data, and, ~~in the case in which~~

when a reproduction position reaches a recording end ~~point~~position in the reproduction management information, the reproduction control process execution unit is operable to ~~execute control for~~ shifting to a reproduction ending processing.

15. (currently amended) An information recording and reproduction processing apparatus according to claim 9, ~~characterized in that~~wherein

~~the reproduction control process execution unit is~~ constituted to, in the case in which when reproduction synchronization management information is detected, the reproduction control process execution unit is operable to periodically verify the presence or absence of the reproduction synchronization management information, ~~in the case in which~~

when the reproduction synchronization management information is erased, the reproduction control process execution unit is operable to execute reproduction control for data as recorded data, and, ~~in the case in which~~

when a reproduction position reaches a recording end ~~point~~position in the reproduction management information, the reproduction control process execution unit is operable to ~~execute control for~~ shifting to a reproduction ending processing.

16. (currently amended) An information recording processing method for executing data recording processing, ~~characterized by the method~~ comprising:

~~a reproduction synchronization management information generation step of, in the case of data recording processing,~~ generating reproduction synchronization management information indicating that recording ~~processing for~~ of data is in progress;

~~an association processing step of associating the reproduction synchronization management information towith the reproduction management information; and~~

~~a reproduction synchronization management information recording step of executing processing for recording the reproduction synchronization management information in a directory that is automatically erased at the time of system startup or at the time of system shutdown.~~

17. (currently amended) An information recording processing method according to claim 16, ~~characterized in that~~wherein

~~the reproduction synchronization management information recording step is a step of executing processing for~~includes storing the reproduction synchronization management information in a volatile memory.

18. (currently amended) An information recording processing method according to claim 16, ~~characterized in that~~wherein

~~the association associating processing step is a step of executing processing for~~includes setting a reproduction synchronization management information name, ~~which is set in the reproduction synchronization management information,~~ as a file name that can be identified uniquely from ~~the~~a reproduction management information name.

19. (currently amended) An information recording processing method according to claim 16, ~~characterized in that~~

~~the information recording processing method further comprises~~ing:

~~a step of generating an identifier (ID) with which the reproduction management information can be identified uniquely~~

and outputting the ~~generated~~ identifier to an upper layer process execution unit; and

~~a step of~~ storing the identifier (ID) in a storing unit and managing the identifier in the upper layer process execution unit.

20. (currently amended) An information recording processing method for executing data recording processing, ~~characterized by the method comprising:~~

~~a management information generation step of, in the case of data recording processing, generating reproduction synchronization management information indicating that recording processing for~~ data is in progress and recording management information having link information ~~effor~~ for the reproduction synchronization management information;

~~a management information recording processing step of~~ storing the ~~generated~~ reproduction synchronization management information and the recording management information in storing means; and

~~a management information erasing step of, at the time of system start up, executing retrieval~~ retrieving processing for recording management information including link information, extracting and erasing reproduction synchronization management information on the basis of the retrieved link information ~~of extracted recording management information~~, and executing erasing processing for the ~~extracted~~ retrieved recording management information.

21. (currently amended) An information recording processing method according to claim 20, ~~characterized in that~~ wherein

~~the management information recording processing~~ storing step ~~executes~~ includes recording of data to be an object of

reproduction ~~processing~~ and recording ~~of~~ the reproduction synchronization management information and the recording management information ~~with respect to the storing means constituted by a nonvolatile memory.~~

22. (currently amended) An information recording processing method according to claim 20, ~~characterized in that~~ further comprising:

~~the information recording processing method further comprises:~~

~~a step of~~ generating an identifier (ID) with which the reproduction management information can be identified uniquely and outputting the ~~generated~~ identifier to an upper layer process execution unit; and

~~a step of~~ storing the identifier (ID) in a storing unit and managing the identifier in the upper layer process execution unit.

23. (cancelled)

24. (cancelled)

25. (cancelled)

26. (cancelled)

27. (cancelled)

28. (cancelled)

29. (currently amended) A computer program for executing a data recording processing, ~~characterized by~~ the process comprising:

~~a reproduction synchronization management information generation step of, in the case of data recording processing,~~
generating reproduction synchronization management information indicating that recording ~~processing for~~of data is in progress;

~~an association processing step of associating the reproduction synchronization management information tewith~~ the reproduction management information; and

~~a reproduction synchronization management information recording step of executing processing for recording the reproduction synchronization management information in a directory that is automatically erased at the time of system startup or at the time of system shutdown.~~

30. (currently amended) A computer program for executing a data recording processing, the processe~~characterized by~~ comprising:

~~a management information generation step of, in the case of data recording processing,~~ generating reproduction synchronization management information indicating that recording ~~processing for~~of data is in progress and recording management information having link information ~~effor~~for the reproduction synchronization management information;

~~a management information recording processing step of~~ storing the ~~generated~~ reproduction synchronization management information and the recording management information in storing means; and

~~a management information erasing step of, at the time of system start up, executing retrieval~~retrieving processing for recording management information including link information, extracting and erasing reproduction synchronization management information on the basis of the retrieved link information ~~of extracted recording management information,~~ and executing

| erasing ~~processing for~~ the ~~extracted~~retrieved recording
management information.

31. (cancelled)